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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/746,405	12/26/2000	Nicholas P.R. Hill	085874/0294	3343

22120 7590 05/17/2005

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EXAMINER	
SHAPIRO, LEONID	
ART UNIT	**PAPER NUMBER**
2673	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/746,405	HILL, NICHOLAS P.R.
	Examiner	Art Unit
	Leonid Shapiro	2673

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-16,18-21,23-33,35-62,64-70,72-74,76-79,81,82,84-88,90-97 and 99-106* is/are pending in the application.

4a) Of the above claim(s) *23-33,35-62,76-79,81-88,90-97,103 and 106* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-16,18-21,62,64-70,72-74,99-102,104 and 105* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1, 3, 6-7, 21, 62, 67, 101-102, 104-105 rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al. (US Patent 6,414,673 B1) in view of Azima et al. (US Patent no. 6,580,799 B1) and Gill et al. (US Patent No. 5,831,934).

As to claim 1, Wood et al. teaches a method of determining information relating to a contact on a passive contact sensitive device (See Col. 2, Lines 65-57) comprising the steps of:

providing a member capable of supporting wave vibration (See Fig. 1, item 12, from Col. 4, Line 66 to Col. 5, Line 3),

contacting the member at a discrete location to generate wave vibration in the member (See Fig. 1, items 30, X1, Y1, Col. 5, Lines 11-16),

measuring the wave vibration in the member to determine a measured bending wave signal (See Fig. 1, items 20a, 20b, 16, 18, 30, Col. 5, Lines 9-27), and

processing the measured wave signal to calculate information relating the contact (See Fig. 1, items 20a, 20b, 16, 18, 30, Col. 5, Lines 20-27).

Wood et al. does not show bending wave vibration.

Azima et al. teaches user interface with bending waves comprising touchpad or keyboard (See Fig. 1, items 48, 78, Col. 4, Lines 5-29, Col. 3, Line 50-55 and Col. 2, Lines 28-30).

It would have been obvious to one of ordinary skill in the art at the time of invention use Azima et al. approach in the Wood et al. apparatus in order to excite bending wave modes (See Col. 1, Lines 42-47 in the Azima et al. reference).

Wood et al. and Azima et al. do not show a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source.

Gill et al. teaches to apply a correction to convert the measured bending wave signal to a propagation signal by fitting the data to a mathematical model of dispersion (See Col. 27, Lines 58-63).

It would have been obvious to one of ordinary skill in the art at the time of invention use Gill et al. approach in the Wood et al. and Azima et al. apparatus and method in order to provide improved measurements (See Col. 27, Line 62 in Gill et al. reference).

As to claim 62, Wood et al. teaches a passive contact sensitive device (See Col. 2, Lines 65-57) comprising:

a member capable of supporting wave vibration (See Fig. 1, item 12, from Col. 4, Line 66 to Col. 5, Line 3),

at least one sensor coupled to the member for measuring wave vibration in the member (See Fig. 1, items 20a, 20b, 16, 18, 30, Col. 5, Lines 9-27), and

processing the measured wave signal to calculate information relating the contact (See Fig. 1, items 30, 16, 18, 30, Col. 5, Lines 20-27).

Wood et al. does not show bending wave vibration.

Azima et al. teaches user interface with bending waves comprising touchpad or keyboard (See Fig. 1, items 48, 78, Col. 4, Lines 5-29, Col. 3, Line 50-55 and Col. 2, Lines 28-30).

It would have been obvious to one of ordinary skill in the art at the time of invention use Azima et al. approach in the Knowles et al. method in order to excite bending wave modes (See Col. 1, Lines 42-47 in the Azima et al. reference).

Knowles et al. and Azima et al. do not show a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source.

Gill et al. teaches to apply a correction to convert the measured bending wave signal to a propagation signal by fitting the data to a mathematical model of dispersion (See Col. 27, Lines 58-63).

It would have been obvious to one of ordinary skill in the art at the time of invention use Gill et al. approach in the Knowles et al. and Azima et al. apparatus and method in order to provide improved measurements (See Col. 27, Line 62 in Gill et al. reference).

As to claim 101, Wood et al. teaches a method of determining information relating to a contact on a passive contact sensitive device (See Col. 2, Lines 65-57) comprising the steps of:

contacting the member capable of supporting waves to produce a change in wave vibration in the member (See Fig. 1, items 30, X1, Y1, Col. 5, Lines 11-16),

measuring the wave vibration in the member to determine a measured bending wave signal (See Fig. 1, items 20a, 20b, 16, 18, 30, Col. 5, Lines 9-27), and

processing the measured wave signal to calculate information relating the contact (See Fig. 1, items 20a, 20b, 16, 18, 30, Col. 5, Lines 20-27).

Wood et al. does not show bending wave vibration.

Azima et al. teaches user interface with bending waves comprising touchpad or keyboard (See Fig. 1, items 48, 78, Col. 4, Lines 5-29, Col. 3, Line 50-55 and Col. 2, Lines 28-30).

It would have been obvious to one of ordinary skill in the art at the time of invention use Azima et al. approach in the Wood et al. method in order to excite bending wave modes (See Col. 1, Lines 42-47 in the Azima et al. reference).

Wood et al. and Azima et al. do not show a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source.

Gill et al. teaches to apply a correction to convert the measured bending wave signal to a propagation signal by fitting the data to a mathematical model of dispersion (See Col. 27, Lines 58-63).

It would have been obvious to one of ordinary skill in the art at the time of invention use Gill et al. approach in the Knowles et al. and Azima et al. apparatus and method in order to provide improved measurements (See Col. 27, Line 62 in Gill et al. reference).

As to claim 104, Wood et al. teaches a passive contact sensitive device (See Col. 2, Lines 65-57) comprising:

a member capable of supporting wave vibration (See Fig. 1, item 12, from Col. 4, Line 66 to Col. 5, Line 3),

at least one sensor coupled to the member for measuring wave vibration in the member (See Fig. 1, items 20a, 20b, 16, 18, 30, Col. 5, Lines 9-27), and

processing the measured wave signal to calculate information relating the contact (See Fig. 1, items 30, 16, 18, 30, Col. 5, Lines 20-27).

Wood et al. does not show bending wave vibration.

Azima et al. teaches user interface with bending waves comprising touchpad or keyboard (See Fig. 1, items 48, 78, Col. 4, Lines 5-29, Col. 3, Line 50-55 and Col. 2, Lines 28-30).

It would have been obvious to one of ordinary skill in the art at the time of invention use Azima et al. approach in the Knowles et al. method in order to excite bending wave modes (See Col. 1, Lines 42-47 in the Azima et al. reference).

Knowles et al. and Azima et al. do not show a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source.

Gill et al. teaches to apply a correction to convert the measured bending wave signal to a propagation signal by fitting the data to a mathematical model of dispersion (See Col. 27, Lines 58-63).

It would have been obvious to one of ordinary skill in the art at the time of invention use Gill et al. approach in the Knowles et al. and Azima et al. apparatus and method in order to provide improved measurements (See Col. 27, Line 62 in Gill et al. reference).

As to claim 7, Wood et al. teaches about the information related to location of the contact (See Fig. 1, item 36, Col. 5, Lines 28-45).

As to claims 21, 67, Azima et al. teaches keys are spaced from the edges of the member (See Fig. 1, item 14, col. 4, Lines 5-29).

As to claims 102, 105 Azima et al. teaches the contact sensitive device is passive and the change in bending wave vibration in the member induced by the contact (to the key of the keyboard) is an excitation to bending wave vibration in the member (See Fig. 1, items 48, 78, Col. 4, Lines 5-29, Col. 3, Line 50-55 and Col. 2, Lines 28-30).

As to claims 3, 6, Knowles et al. and Azima et al. do not teach a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source, connected to a material of a member and using self-measuring scheme which is incorporated into the contact sensitive device source.

Gill et al. teaches to apply a correction to convert the measured bending wave signal to a propagation signal by fitting the data to a mathematical model of dispersion (See Col. 27, Lines 58-63).

It would have been obvious to one of ordinary skill in the art at the time of invention use Gill et al. approach in the Knowles et al., Azima et al. apparatus in order to provide improved measurements (See Col. 27, Line 62 in Gill et al. reference).

2. Claims 99-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al. in view of Azima et al.

As to claim 99, Wood et al. teaches a method of determining information relating to a contact on a passive contact sensitive device (See Col. 2, Lines 65-57) comprising the steps of:

providing a member capable of supporting wave vibration (See Fig. 1, item 12, from Col. 4, Line 66 to Col. 5, Line 3),

contacting the member to generate wave vibration in the member (See Fig. 1, items 30, X1, Y1, Col. 5, Lines 11-16),

measuring the wave vibration in the member to determine a measured wave signal (See Fig. 1, items 20a, 20b, 16, 18, 30, Col. 5, Lines 9-27), and

processing the measured wave signal to calculate information relating the contact (See Fig. 1, items 20a, 20b, 16, 18, 30, Col. 5, Lines 20-27).

Wood et al. does not show bending wave vibration.

Azima et al. teaches user interface with bending waves comprising touchpad or keyboard (See Fig. 1, items 48, 78, Col. 4, Lines 5-29, Col. 3, Line 50-55 and Col. 2, Lines 28-30).

It would have been obvious to one of ordinary skill in the art at the time of invention use Azima et al. approach in the Knowles et al. method in order to excite bending wave modes (See Col. 1, Lines 42-47 in the Azima et al. reference).

As to claim 100, Wood et al. and Azima et al. do not show how to apply a correction to convert the measured bending wave signal to a propagation signal from a non-dispersive wave source.

Gill et al. teaches to apply a correction to convert the measured bending wave signal to a propagation signal by fitting the data to a mathematical model of dispersion (See Col. 27, Lines 58-63).

It would have been obvious to one of ordinary skill in the art at the time of invention use Gill et al. approach in the Knowles et al. and Azima et al. apparatus in order to provide improved measurements (See Col. 27, Line 62 in Gill et al. reference).

3. Claims 8-9, 20, 66, 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al. and Azima et al. as applied to claim 1, 62 in view of Knowles (US Patent No. 5,329,070).

As to claim 8, Wood et al. and Azima et al. do not show the information related to pressure of the contact.

Knowles et al. teaches the information related to pressure of the contact (See Fig. 8, intensity of the signal at times t-tx and t-ty).

It would have been obvious to one of ordinary skill in the art at the time of invention use Knowles approach in the Wood et al. and Azima et al. apparatus in order to provide improved measurements.

As to claim 9, Wood et al. and Azima et al. do not show the information related to size of the contact.

Knowles et al. teaches the information related to size of the contact (See Fig. 8, duration of the pulses).

It would have been obvious to one of ordinary skill in the art at the time of invention use Knowles approach in the Wood et al. and Azima et al. apparatus in order to provide improved measurements.

As to claim 20, Wood et al. and Azima et al. do not show measuring the changed wave vibration at an edge of the member.

Knowles et al. teaches about measuring the changed wave vibration at an edge of the member (See Fig. 3, items 18, 20, 22, 24, in description See Col. 7, Lines 16-21).

It would have been obvious to one of ordinary skill in the art at the time of invention use Knowles approach in the Wood et al. and Azima et al. apparatus in order to provide improved measurements.

As to claim 66, Wood et al. and Azima et al. do not show generating wave vibration in the member from one location the member to probe to probe for information relating to the contact.

Knowles et al. teaches generating wave vibration in the member from one location the member to probe to probe for information relating to the contact (See Fig. 11, item 18, in description See Col. 17, Lines 15-19).

It would have been obvious to one of ordinary skill in the art at the time of invention use Knowles approach in the Wood et al. and Azima et al. apparatus in order to provide improved measurements.

As to claims 69, Wood et al. and Azima et al. do not show the member is in the form of a panel.

Knowles et al. teaches about the member is in the form of a panel (Fig. 3, item 37).

It would have been obvious to one of ordinary skill in the art at the time of invention use Knowles approach in the Wood et al. and Azima et al. apparatus in order to provide improved measurements.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al., Azima et al. and Gill et al. as aforementioned in claim 3 in view of Weigers et al. (US Patent No. 5,856,820).

Wood et al., Azima et al. and Gill et al. do not teach about the modeling by using the bending wave equation in combination with known physical parameters of the material of the member.

Weigers et al. show the usage of the wave equation in relation to the backing layer (See in description Col. 2, Lines 63-66).

It would been obvious to the one ordinary skill in the art in the time of invention to use Weigers et al. approach in the Wood et al., Azima et al. and Gill et al. method in order to improve the quality of the touch detection.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al., Azima et al. and Gill et al. as aforementioned in claim 3, 35 in view of Zook et al. (US Patent No. 6,246,638 B 1).

Wood et al., Azima et al. and Gill et al. do not teach about the dispersion relation is measured by using a laser vibrometer to create an image of the vibration pattern in the member for a number of given frequencies to give the dispersion relation in the frequency range of interest.

Zook et al. show the usage of the laser vibrometer to measure the amplitude of vibration for the given frequency (See in description Col 5, Lines 57-60).

It would been obvious to the one ordinary skill in the art in the time of invention to use Zook et al. approach in the Wood et al., Kambara et al. and Gill et al. method in order to improve the quality of the touch detection.

6. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al., Azima et al. and Gill et al. as aforementioned in claim 1 in view of Takahashi et al. (US Patent No. 5,638,093).

Wood et al., Azima et al. and Gill et al. do not teach about determination by the frequency content of measured bending wave of the contact type (finger or stylus).

Takahashi et al. shows how to determine accurately and stably the contact type by the width of the area touched (See Fig. 3, 7, item 201-210, in description See Col. 4, Lines 31-36 and Col. 7, 62-66). As notoriously well known in the art there is direct relationship between the width of the pulse (See Fig. 7) in the time domain and the frequency content in the frequency domain.

It would been obvious to the one ordinary skill in the art in the time of invention to use Takahashi et al. approach in the Wood et al., Azima et al. and Gill et al. apparatus in order to improve the quality of the touch detection.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al., Azima et al. and Gill et al. as aforementioned in claim 1 in view of Tager et al. (US Patent No. 6,160,757).

Wood et al., Azima et al. and Gill et al. do not teach about the usage an adaptive algorithm to derive information relating to the contact from measuring bending wave signal.

Tager et al shows how to use adaptive algorithms to estimate field for acoustic-pickups (See in description Col.5, Lines 50-67).

It would been obvious to the one ordinary skill in the art in the time of invention to use Tager et al. approach in the Wood et al., Azima et al. and Gill et al. apparatus in order to improve the quality of the touch detection with member of complex shape.

8. Claim 16, is rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al., Azima et al., Gill et al. and Tager et al. as aforementioned in claims 15, 47 in view of Hoffberg et al. (US Patent No. 6,400,996 B1).

Wood et al., Azima et al., Gill et al. and Tager et al. do not teach about the implementation of adaptive algorithm in a neural net.

Hoffberg et al. teaches about neural networks as important tools for extracting patterns from complex input sets (See in description Col. 21, Lines 18-30).

It would been obvious to the one ordinary skill in the art in the time of invention to use Hoffberg et al. approach in the Wood et al., Azima et al., Gill et al. and Tager et al. apparatus in order to improve the quality of the touch detection with member of complex shape with the usage of an adaptive algorithm.

9. Claim 18 rejected under 35 U. S. C. 103 (a) as being unpatentable over Wood et al., Azima et al. and Gill et al. as aforementioned in claim 1 in view of Flowers (US Patent No. 6,160,757).

Knowles et al., Azima et al. and Gill et al. do not teach about the bending wave vibration in the member is caused by the background noise.

Flowers describes the background noise in location system (See in description Col.3, Lines 23-25).

It would have been obvious to the one ordinary skill in the art in the time of invention to use Flowers approach in the Wood et al., Azima et al. and Gill et al.

apparatus in order to improve the quality of the touch detection by reducing the background noise.

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al., Azima et al. and Gill et al. as aforementioned in claims 1, 101, 52 in view of Kent (US Patent No. 5,986,224).

Wood et al., Azima et al. and Gill et al. do not teach about comparing the measured bending wave signal with a reference signal to identify when contact made.

Kent teaches about reference signal compensating for many physical characteristics, drift, temperature... (See in description Co1.40, Lines 29-33).

It would been obvious to the one ordinary skill in the art in the time of invention to use Kent approach in the Wood et al., Azima et al. and Gill et al. apparatus in order to improve the quality of the touch detection by the use of the reference signal.

11. Claims 68, 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al., Azima et al. and Gill et al. as aforementioned in claim 62, 75 in view of Hotta et al. (US Patent No. 4,389,711).

Wood et al., Azima et al. and Gill et al. do not teach about the member is transparent with uniform thickness.

Hotta et al. show the usage of the transparent member (See Fig. 2, item 3, in description Col 5, Lines 1-2). It would been obvious to the one ordinary skill in the art in

the time of invention to use Hotta et al. approach in the Wood et al., Azima et al. and Gill et al. apparatus in order to improve the quality of the touch detection.

12. Claims 64-65, 73-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al., Azima et al. and Gill et al. as aforementioned in claims 62-63, 75 in view of Koh et al. (US Patent No 6,335,725 B I).

As to claims 73-74, Wood et al., Azima et al. and Gill et al. do not teach about a lap-top computer or a personal data assistant with contact sensitive device.

Koh et al. shows the usage of the contact sensitive device in a lap-top computer or a personal data assistant (See Fig. 1, items 2, 4, 8, in description Col 3, Lines 23-29).

It would been obvious to the one ordinary skill in the art in the time of invention to use Wood et al., Azima et al. and Gill et al. device in the Koh et al. apparatus in order to widen the area of applications for touch sensitive devices.

As to claims 64-65, Wood et al., Azima et al. and Gill et al. do not teach LCD display screen.

Koh et al. shows LCD display screen (See Fig. 1, items 2, 4, 8, in description Col 3, Lines 23-29).

It would been obvious to the one ordinary skill in the art in the time of invention to use Wood et al., Azima et al. and Gill et al. device in the Koh et al. apparatus in order to widen the area of applications for touch sensitive devices.

13. Claim 72 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al., Azima et al. and Gill et al. as aforementioned in claim 62 in view of Ketwich (US Patent No 6,072,475).

Wood et al., Azima et al. and Gill et al. do not teach about mobile phone with contact sensitive device.

Ketwich shows the usage of the contact sensitive device in a mobile phone (See Fig. 12b, item 1975, item I911, in description Col 11, Lines 48-53).

It would been obvious to the one ordinary skill in the art in the time of invention to use Wood et al., Azima et al. and Gill et al. device in the Ketwich apparatus in order to widen the area of applications for touch sensitive devices.

14. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al., Azima et al. and Gill et al. as aforementioned in claims 1, 101, 52 in view of Hoffberg et al. (US Patent No. 6,400,996 B1).

Wood et al., Azima et al. and Gill et al. do not teach about the implementation of adaptive algorithm in a neural net.

Hoffberg et al. teaches about neural networks as important tools for extracting patterns from complex input sets (See in description Col. 21, Lines 18-30).

It would been obvious to the one ordinary skill in the art in the time of invention to use Hoffberg et al. approach in the Wood et al., Azima et al. and Gill et al. apparatus in order to improve the quality of the touch detection with member of complex shape with the usage of an adaptive algorithm.

Response to Amendment

15. Applicant's arguments filed on 10.23.03 with respect to claims 1, 3-16,18-21, 62, 64-70, 72-74, 99-102, 104-105 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

The Azima et al. (Pub. No.: US 2001/0026625 A1) reference discloses passive touch panel.

Telephone inquire

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 571-272-7683. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ls 05.06.05

VIJAY SHANKAR
PRIMARY EXAMINER